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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,032	10/02/2003	Masaharu Takizawa	Q77826	6923
23373	7590	02/06/2006	EXAMINER MACARTHUR, SYLVIA	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			ART UNIT 1763	PAPER NUMBER

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/676,032

Applicant(s)

TAKIZAWA, MASA HARU

Examiner

Sylvia R. MacArthur

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 12-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/8/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-11, drawn to an apparatus for removing edge pool, classified in class 156, subclass 345.55.
 - II. Claims 12-19, drawn to a coating method, classified in class 427, subclass 352.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus can be used to apply a coating material at the edge on a wafer side surface.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Howard Bernstein on January 17, 2006 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-11. Affirmation of this election must be made by applicant in replying to this Office action. Claims 12-19 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Saito et al (US 2003/041968).

Saito et al teaches a substrate processing apparatus wherein

Regarding claim 1: A coating apparatus for removing edge pool formed on a wafer side surface of a coating film deposited on a wafer by edge rinse treatment using a rinse solution, comprising:

a mechanism 14 in which the edge rinse treatment is performed using a rinse solution containing a mixture of solvents having different dissolving rates for dissolving the coating film, see abstract and sections[004,005].

Regarding claim 2: The coating apparatus according to Claim 1, wherein the dissolving rates vary in accordance with types of coating film, and the mixture of solvents minimizes an edge hump of the coating film, see the abstract.

Regarding claim 3: The coating apparatus according to Claim 1, wherein the mechanism comprises a flow adjust device (solenoid operated valves, see [0056] for changing a ratio between the solvents contained in the rinse solution in accordance with the coating film.

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Regarding claim 4: The coating apparatus according to Claim 3, wherein the ratio between the solvents contained in the rinse solution is adjusted using the flow adjust device in accordance with the dissolving rate for dissolving the coating film, see sections [0056,0057].

Regarding claim 5: The coating apparatus according to Claim 1, wherein the coating film is an organic antireflection film or a photoresist film. This claim is a matter of an intended use, does not provide structural limitation and is not given patentable weight, also note that the apparatus of Saito et al is capable of removing the edge pool of the films listed in claim 5.

Regarding claim 6: The coating apparatus according to Claim 5, wherein the solvents comprise isopropyl alcohol and polyethylene glycol monomethyl ether acetate. This claim is a matter of an intended use, does not provide structural limitation and is not given patentable weight, also note that the apparatus of Saito et al is capable of removing the edge pool using the solvents discussed in claim 6.

7. A coating apparatus for removing edge pool formed on a wafer side surface of a coating film deposited on a wafer by edge rinse treatment using a rinse solution, comprising:

a mechanism in which the edge rinse treatment is performed using any one selected from solvents having different dissolving rates for dissolving the coating film, the any one selected from solvents being used as the rinse solution see abstract and sections[004,005].

8. The coating apparatus according to Claim 7,

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wherein the dissolving rates vary in accordance with types of coating film, and the any one selected from the solvents minimizes an edge hump of the coating film see the abstract.

9. The coating apparatus according to Claim 7,

wherein the mechanism comprises rinse nozzles (supply pipes where nozzles are inherently present are discussed in [0052 and 0058] for supplying the solvents having different dissolving rates for dissolving the coating film.

10. The coating apparatus according to Claim 7,

wherein the coating film is an organic antireflection film or a photoresist film This claim is a matter of an intended use, does not provide structural limitation and is not given patentable weight, also note that the apparatus of Saito et al is capable of removing the edge pool of the films listed in claim 10.

11. The coating apparatus according to Claim 10,

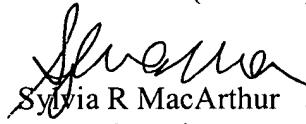
wherein the solvents comprise isopropyl alcohol and polyethylene glycol monomethyl ether acetate This claim is a matter of an intended use, does not provide structural limitation and is not given patentable weight, also note that the apparatus of Saito et al is capable of removing the edge pool using the solvents discussed in claim 11.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sylvia R. MacArthur whose telephone number is 571-272-1438. The examiner can normally be reached on M-F during the core hours of 9 a.m. and 3 p.m.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sylvia R MacArthur
Patent Examiner
Art Unit 1763

January 22, 2006